ABSTRACT:

The electric lamp comprises a lamp vessel (1) which is transparent to visible light and which accommodates a light source. At least a part of the lamp vessel (1) is covered with a light-absorbing coating (3). According to the invention, said light-absorbing coating (3) comprises a network which can be obtained by conversion of an organically modified silane by means of a sol-gel process. The organically modified silane is selected from the group formed by compounds of structural formula $R^{I}Si(OR^{II})_3$, wherein R^{I} is an alkyl or aryl group and R^{II} is an alkyl group. Preferably, R^{I} is CH_3 or C_6H_5 and R^{II} is CH_3 or C_2H_5. Nano-sized silica particles having a diameter $d \leq 50$ nm may be incorporated in the network. The pigment is preferably chosen from the group formed by Fe_2O_3, P-doped Fe_2O_3, $ZnFe_2O_4$, $ZnO.Fe_2O_4$, $CoAl_2O_4$, Nd_2O_5, $BiVO_4$ and zirconium praseodymium silicate or mixtures thereof. The light-absorbing coating (3) of the electric lamp according to the invention is optically transparent, substantially free of scattering and stable at temperatures up to 350 °C.

Fig. 1